

NEW SPECIES, VARIETIES AND COMBINATIONS FROM THE COLLECTIONS OF THE ARNOLD ARBORETUM

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Rubus barbatus Edgeworth in Trans. Linn. Soc. Lond. **20**: 46 [1846], nom. provisor. — Focke in Bibl. Bot. **72**: 39 (1910), pro synonym.

Rubus nutans Wallich, Num. List, no. 738 [1829], nom. nud. — G. Don, Gen. Hist. Dichlam. Pl. **2**: 538 (1832). — Edgeworth in Trans. Linn. Soc. Lond. **20**: 45 [1846]. — Walpers, Ann. Bot. Syst. **1**: 276 (1848). — Hooker f. in Bot. Mag. **83**: t. 5023 (1857). — Focke in Bibl. Bot. **72**: 39 (1910). — Non Vest (1824).

Though Edgeworth (l. c.) drew attention to the fact that the name *Rubus nutans* Wallich is invalidated by the earlier name *R. nutans* Vest (in Syll. Pl. Nov. Ratisbon. **1**: 238. 1824) and proposed the new name *R. barbatus* for this species, he nevertheless retained *R. nutans* Wall. and published a description under the latter name. The name *R. barbatus* must therefore be classed as a *nomen provisorium* or *eventuale* and it cannot be considered as validly published. However, as no other name is available for this species, and the application of *R. barbatus* does not leave the slightest doubt, it should be taken up as the valid name for this species.

Rubus idaeus var. **strigosus** f. **succineus**, nom. nov.

Rubus strigosus var. *albus* Fuller ex Bailey, Cycl. Am. Hort. [4] 1582 (1902).

Rubus idaeus var. *aculeatissimus* f. *albus* Fernald in Rhodora, **10**: 50 (1908), non *R. idaeus* 2. *albus* Weston (1770) et *R. i.* var. *albus* Aiton (1789).

Rubus idaeus var. *strigosus* f. *albus* Fernald in Rhodora, **21**: 96 (1919), non Weston (1770), nec Aiton (1789).

For the form of *Rubus idaeus* var. *strigosus* (Michx.) Maxim. with amber-white fruit, the name of *succineus* is here proposed referring to the amber-colored fruit, because there is an older subdivision of the same name under *Rubus idaeus* based on a different type, namely "albus" of Weston and Aiton,¹ based on a form with white or yellowish fruits of the European variety of *R. idaeus*, *R. idaeus* var. *vulgatus* Arrhenius.

Even if Weston's name should be rejected as doubtful, since he characterized the variety as "flore albo" which is apparently a slip of the pen for "fructu albo," Aiton's name would stand.

As Dr. L. H. Bailey informs me, a plant of *R. strigosus* var. *albus* was received from A. S. Fuller under that name and specimens of this plant grown at Cornell University collected in 1890, 1891 and 1892, are in the herbarium of Cornell University. Apparently Fuller never published the name himself; it is not mentioned in his "Small fruit culturist," and by Card in his Bush-fruits, p. 318 (1898), it is referred to only as a white variety of *R. strigosus*.

¹ *Rubus Idaeus* 2. *albus* Weston, Bot. Univ. **1**: 256 (1770). — Aiton, Hort. Kew. **2**: 209 (1789) "β." — K. Koch, Hort. Dendr. 113 (1853) "β."

Rubus idaeus subsp. *vulgatus* f. *luteofructifer* Schneider, Ill. Handb. Laubh. **1**: 510 (1905).

Cytisus villosus Pourret in Mém. Acad. Sci. Toulouse, **3**: 317 (Extr. Chloris Narbon. 21) (1788).

Cytisus nigricans sensu Linnaeus, Mant. Pl. **2**: 444 (1771), non Linnaeus (1753).

Cytisus triflorus L'Héritier, Stirp. Nov. 184 [1791]. — Desfontaines, Fl. Atlant. **2**: 139 [1798]. — De Candolle in Lamarck & De Candolle, Fl. Franç. **4**, **2**: 505 (1805). — Reichenbach f., Icon. Fl. Germ. Helv. **22**: 10, t. 2077, fig. i-iii, 1-6 [1867?]. — Nyman, Consp. Fl. Eur. Suppl. 84 [1884]. — Briquet, Études Cytis. 157 (1894). — Ascherson & Graebner, Syn. Mitteleur. Fl. **6**, **2**: 304 (1907). — Bonnier, Fl. Compl. France Suisse Belg. **3**: 6, t. 121, fig. 629 [1914?]. — Non Lamarck (1786).

Lembotropis triflora Presl in Abh. Böhm. Ges. Wiss. ser. 5, **3**: 568 (Bot. Bemerk. 138. 1844) (1845).

Spartocytisus triflorus Webb in Webb & Berthelot, Phytog. Canar. **2**: 45 in nota [1842]. — K. Koch, Dendr. 28 (1869).

Genista triflora Rouy & Foucaud, Fl. France, **4**: 208 (1897).

Cytisus triflorus L'Hérit. apparently has been accepted so far by all authors as the valid name for this species because the date on the title-page of L'Héritier's work, 1784, was taken as the correct date of publication, or cited as 1784 [-85]. It has been shown, however, by J. Britten in Jour. Bot. **43**: 266 (1905) that the work was published in fascicles of which the last one issued and containing pp. 135-184 did not appear until 1791 (see also Cat. Lib. Brit. Mus. **3**: 1108. 1910). This gives to *C. villosus* Pourr. not only three years' priority over *C. triflorus* L'Hérit., but also makes the latter a later homonym of *C. triflorus* Lamarck of 1786 (in his Encycl. Méth. **2**: 250) which is a synonym of *C. hirsutus* L. (1753). The name *C. villosus* has been used again in 1822 by J. S. & K. B. Presl (in their Deliciae pragenses, 36) for a plant belonging according to Briquet (Études Cytis. Alp. Marit. 173. 1894) to *C. supinus* L. or one of its varieties, but that name does not seem to have been taken by any later author, and anyway being a later homonym is not valid.

Viburnum Tsangii (sect. *Odontotinus*), spec. nov.

Viburnum sempervirens K. Koch ex Rehder in Sargent, Trees & Shrubs, **2**: 95, t. 145 (1908), p. p., quoad fig. 4-7.

Viburnum sempervirens var. *trichophorum* sensu Chun in Sunyatsenia, **4**: 263 (1940), non Handel-Mazzetti (1937).

Frutex 1-3 m. altus, ramulis gracilibus, junioribus satis dense flavide villosis tomento ad tertium annum persistente, quadrangulatis, vetustioribus brunneis; folia persistentia, subcoriacea, elliptica vel obovato-elliptica vel oblonga, rarius ovato-oblonga vel anguste oblonga, 3-7, rarius ad 10 cm. longa, 1.5-4 cm. lata, breviter acuminata vel acuta, basi late cuneata vel interdum rotundata, apicem versus remote paucidentata vel fere integra vel integra, supra glabra, subnitentia, saturate viridia, subtus pallidiora, ad costam satis dense vel sparsius pilosa ad nervos laterales sparsius vel sparse pilosa, ceterum glabra, nervis utrinsecus 4-5, supra impressis, subtus elevatis basalibus robustioribus et longioribus et foliis distincte trinerviis; petioli 3-6 mm. longi, dense villosi. Corymbi 2-4 cm. diam., ramulos elongatos terminantes, subsessiles, rarius pedunculo ad 5 mm. longo suffulti, dense fulvo-villosuli et glandulosi, radiis 4-5, rarius 3; flores albi, fragrantés (fide collectoris) in ramulis secundi vel tertii ordinis, brevissime pedicellati, bractea lineari subglabra ovarium paullulo vel vix superante suffulti; calycis lobi ovati ut ovarium oblongum sparse hirsuti, dimidium

tubum corollae aequantes; corolla 4 mm. diam., glabra, lobis ovato-rotundatis reflexis tubo lato longioribus; stamina erecta, filamentis 2.5–3 mm. longis, antheris ovalibus circ. 1 mm. longis; stylus tubum corollae subaequans, stigmatе punctiformi. Drupae rubrae vel luteo-rubrae et edules (fide collectoris) subglobosae; putamen compressum, suborbiculare, 5–6 mm. diam., apice stylo persistente mucronulatum, ventre profunde concavo, dorso convexum laeve et medio laevissime vel vix sulcatum.

Affinis *V. sempervirenti* K. Koch sed ramulis corymbo petiolis dense villosis, foliis tantum subcoriaceis in sicco non nigricantibus ad costam subtus pilosis, corymbo minore plerumque 3–4-radiato et habitu graciliore facile distinguitur.

TONKIN. Ha-coi, Taai Wong Mo Shan and vicinity: Tong Fa Market, *W. T. Tsang*, 29571 (TYPE in herbarium Arnold Arboretum, ut cetera specimina citata), Sept. 11–23, 1939 (height 4 ft.; fruit yellowish red, edible); Chan Uk Village near Chuk-phai, *W. T. Tsang*, 28977, May 3–10, 1939 (height 5 ft.; flowers white, fragrant); Shui Mei Village, northeast of Chuk-phai, *W. T. Tsang*, 29281, June 23–30, 1939 (height 5 ft.; fruit reddish-yellow, edible); Chuk-phai, *W. T. Tsang*, 27264, Nov. 18 – Dec. 2, 1936 (height 7 ft.; fruit red, edible). Tien-yen: Kau Nga Shan and vicinity, *W. T. Tsang*, 27432, Dec. 23–29, 1936 (height 5 ft.; fruit red, edible), and 30507, Sept. 23 – Oct. 7, 1940. Dam-ha: Sai Wong Mo Shan (Sai Vong Mo Leng), Lung Wan Village, *W. T. Tsang*, 29838, 30132, May 18 – July 5, 1940; Sai Wong Mo Shan, Lomg Ngong Village, *W. T. Tsang*, 30229, July 18 – Sept. 9, 1940.

CHINA. Kwangtung: Fang Ch'eng Distr., Na Leung and vicinity, *W. T. Tsang* 26524, July 24–31, 1936 (fruit red, edible); Fang Ch'eng Distr., Kung P'ing Shan and vicinity, *W. T. Tsang* 26646, Aug. 15–24, 1936 (height 5 ft.; fruit reddish black, edible); Kochow Distr., *Tsiang Ying* 2296, May 14, 1929. Kwangsi: Hop Po Distr., *H. Y. Liang* 69354, 69395, June 5, 12, 1937; east of Tung Hing City, *H. Y. Liang* 69460, July 7, 1937 (shrub, 1 m.); Na Pa, Sup Man Ta Shan, *H. Y. Liang* 69532, 69541, July 9, 1937 (shrub, 1–2 m.). Hainan: Bo-ting, *S. K. Lau* 28162, Nov. 9, 1936 (height 3 m., fruit orange); Manning, *S. K. Lau* 28255, Nov. 26, 1936 (height 3 m.). Yunnan: Szemao, s. mountains, alt. 5000 ft. *A. Henry* 12753, 1896–99.

Viburnum Tsangii is closely related to *V. sempervirens* K. Koch, from which it differs chiefly in the dense yellowish villous pubescence of the branchlets persisting to the third year, in the pubescent inflorescence and sparingly hairy ovary and calyx, in the villous petioles and the pilose midrib of the underside of the leaves which are less coriaceous and generally smaller; the whole habit of the plant is slenderer. The specimens collected in Kwangsi by *H. Y. Liang* under no. 69395, and 69541 cited above and two other specimens I have not seen, were referred by Chun (l. c.) to *V. sempervirens* var. *trichophorum* Hand.-Mazz., but this variety, of which I have isotypes before me, has a different pubescence consisting on the branchlets of distinct very short fascicled hairs and a short pubescence on the inflorescence, otherwise it has all the characters of typical *V. sempervirens*; it was described by Handel-Mazzetti (in Bot. Centralbl. Beih. 56: 465. 1937) from Chekiang which constitutes the northern limit of the range of *V. sempervirens*; to var. *trichophorum* I have referred *W. T. Tsang* from Kwangtung and *H. H. Chung* 7963 from Fukien which agree also in the comparatively broad mostly elliptic or ovate leaves with the other specimens of this variety. The occurrence of the variety falls within the range of *V. sempervirens* which extends, according to the material in our herbarium from Kwangsi and Hainan, through Kwangtung and Fukien to

Chekiang and east to Kiangsi and southeastern Kweichou (*Cavalerie* 1056 and *Tsiang* 6385). *Viburnum Tsangii* is of more southwestern distribution and ranges from northeastern Tonkin to southern Kwangsi and Kwangtung to Hainan and west to southeastern Yunnan (*Henry* 12753 from Szemao).¹

Viburnum Tsangii* f. *xanthocarpum, forma nov.

A typo differt drupis luteis.

TONKIN. Tien-yen, Ho Yung Shan and vicinity, *W. T. Tsang* 30742, Oct. 13 – Nov. 22, 1940.

A form with bright, rather light yellow fruits. Forms with yellow or orange-colored fruit have been observed in several red-fruited species; such are: *Viburnum dilatatum* Thunb. f. *xanthocarpum* Rehd., *V. betulifolium* Batal. f. *aurantiacum* Rehd., *V. setigerum* Hance f. *aurantiacum* Rehd., *V. Opulus* f. *xanthocarpum* (Endl.) Rehd., *V. Sargentii* Koehne f. *flavum* Rehd.

Lonicera Rockii (sect. *Isika* ser. *Purpurascetes*), spec. nov.

Frutex 0.60–1 m. altus, glaber, ramosus, ramulis annotinis epidermate brunneo in laminas deciduas solubili et partim delapso et ad nodos petiolorum bases dilatatas persistentes gerentibus, vetustioribus cortice cinereo fibroso obtectis; gemmae circiter 3 mm. longae, squamis 2 exterioribus carinatis acutiusculis interioribus evolutis majoribus late ovalibus subfoliaceis. Folia nondum perfecte evoluta, ovalia, obtusiuscula, circa 1 cm. longa, glabra vel interdum subtus ad costam sparse glandulosa, brevipetiolata. Flores coetani, plerumque 2 vel 4 paria in ramulis valde abbreviatis simul cum foliis immaturis congestis e gemmis axillaribus orientibus, bini in pedunculo brevissimo, bracteis 2 ovatis vel oblongo-ovatis 6–7 mm. longis obtusiusculis basi attenuatis suffulti; ovaria ad apicem connata, subglobosa, 2 mm. alta, trilocularia loculis pluri-ovulatis; calyx cupularis, irregulariter crenato-dentatus, 0.5–0.7 mm. altus; corolla anguste infundibuliformis circa 1 cm. longa, basi saccata, extus glabra lutea (fide collectoris), tubo intus piloso triente superiore excepto, lobis 5 suborbicularibus vix 2 mm. longis suberectis; stamina 5, antheris oblongis 2 mm. longis quam filamentis glabris paullo longioribus et limbum subaequantibus; stylus lobos paullo superans, basi sparse pilosa excepta glaber. Fructus non visus.

Affinis *L. saccatae* Rehder, sed differt praecipue glabritie, foliis ovalibus, pedunculis brevissimis, bracteis latioribus et corolla lutea.

CHINA. Yunnan: Mount Peimashan, Mekong-Yangtze divide between Aduntze and Pungtzera, *J. F. Rock* 9246, in 1923 (HOLOTYPE in herb. Arnold Arb.) shrub 2–3 ft., flowers yellow).

This new species seems to be related to *L. saccata* Rehd. and particularly to its var. *Wilsoni* Rehd., but is easily distinguished by its glabrousness, its small oval leaves, smaller nearly sessile yellowish flowers with broader ovate to oblong-ovate bracts. The flowers appear with the leaves in the axillary clusters of small crowded leaves along last year's branches and are often partly hidden by the not yet fully developed leaves; their color is given as yellow by the collector, but I suppose it is nearer yellowish or yellowish

¹ *Henry* 12753 I had cited in 1908 (l. c.) under *V. sempervirens* with the remark that it differs from the typical form in its pubescence and referred again to it under that species in 1935 (in Jour. Arnold Arb. 16: 331).

white as in some other species of this series as *L. obovata* Royle, *L. microphylla* Willd. and *L. canadensis* Marsh. In general appearance at flowering time, the species resembles more some glabrous forms of *L. coerulea* L. and *L. cyanocarpa* Franch. than *L. saccata*.

Lonicera oreodoxa H. Smith in herb., spec. nov. (sect. *Isika* ser. *Bracteatae*.)

Frutex humillimus, circ. 10 cm. altus ramis tenuibus pilosis pilis per plures annos persistentibus; gemmae ovoideae, 1.5–2 mm. longae, perulis 2 exterioribus, interioribus accrescentibus scariosis rubescentibus. Folia ovalia vel ovato-ovalia, 6–12 mm. longa et 4–9 mm. lata, obtusa vel acutiuscula basi rotundata, supra sparse longe pilosa, subtus satis dense praecipue ad costam nervosque longe accumbenti-pilosa, 2–3-nervia nervis adscendentibus subtus ut costa elevatis, supra obsolete et costa basin versus leviter impressa; petioli 1–2 mm. longi, pilosi. Flores axillares e basi ramulorum hornotinorum orientes, plerumque par unum pro quoque ramulo, bini in pedunculo gracili laxo piloso 10–12 mm. longo; bracteae late ovatae acutiusculae margine irregulariter subdentatae et piloso-ciliatae, nervosae, 1 cm. longae, extus pilosae, intus sparsius breviter pilosae, piloso-ciliatae, ovaria et basim corollae obtegentes; bracteolae nullae; ovaria distincta, ovoidea, 2 mm. longa, glabra, calyce 5-dentata dentibus late ovatis 1.5 mm. longis ciliatis coronata; corolla 2–2.5 cm. longa tubuloso-infundibuliformis, basi saccata, apicem versus sensim dilatata, limbo subpatente circ. 2 cm. lato, extus sparse glandulosa et sparsissime praesertim ad lobos pilosa, lobis orbiculari-ovatis 6–7 mm. latis, tubo intus piloso triente superiore excepto; stamina 5, antheris exsertis et quam corollae lobis paullo brevioribus anguste oblongis, filamentis 4 mm. longis glabris paullo infra faucem insertis; stylus staminibus aequilongus infra medium longe pilosus. Fructus non visus.

Affinis videtur *L. finitimae* W. W. Sm. sed pube piloso non setoso, foliis minoribus subtus satis dense pilosis, calycis dentibus distinctis, corollae lobis latoribus stylo infra medium longe et satis dense piloso, statura humillima differt.

CHINA. Northern Szechuan: Dongnergo in alpineto 4700–4800 m. alt., July 21, 1922, *Harry Smith*, 3349 (in herb. Upsala et in herb. Arnold Arb.) "frutex humillimas ad 1 dm. altus."

A very distinct species belonging to ser. *Bracteatae* and apparently nearer to *L. finitima* W. W. Sm. than to any other species of this series, but the latter differs markedly in the setose not pilose pubescence, in the larger leaves setose above and on the veins beneath, larger winter-buds, the nearly obsolete calyx-teeth, the oblong-ovate corolla-lobes and the glabrous style. *Lonicera oreodoxa* is remarkable for its low stature, being a densely branched shrub only about 10 cm. high, and for the small size of the leaves hardly exceeding 1 cm. and the comparatively large flowers; it must be quite showy in bloom which probably induced Dr. H. Smith to bestow upon it the specific epithet "*oreodoxa*." I saw this species first in 1928 in the herbarium of Upsala, when Dr. H. Smith kindly gave me a duplicate of it for the Arnold Arboretum.